MONSON'S 2014 WATER QUALITY REPORT

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We are dedicated to providing a safe, dependable and affordable supply of drinking water to our customers.

This report includes 2014 water quality testing results, information on improvements we have made to our water system, and tips to protect our wells and use water wisely. The Massachusetts Department of Environmental Protection (MassDEP) and Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water which we monitor and test accordingly, ensuring that you receive the safest and highest quality drinking water possible.

The new Monson Town Office/Police Station building was completed. Many hours were spent by our staff attending meetings and working with contractors and the job supervisor to ensure the water and sewer services to the structure were correct and as maintenance free as possible. We completed our MassDEP mandated Lead and Copper testing in August and the test results were excellent. The hydrant flushing program which ensures our water quality is at its best, took place in September with no major troubles. Also, all of our early production 929 hydrants (35 out of 98 total 929's) were upgraded to the latest specifications with the help of local machinist Scott Walker. Our quest to convert our maps and service records into a digital format and incorporate them into a geographical information system (GIS) continued with the update of our valve book. The valve book documents the location of each and every water main valve in our system. In other business for 2014, we assisted the Parks and Recreation Department with their CPA project to install an irrigation system and drinking fountain at the Monson High School varsity baseball field.

In additional water operations activities, we repaired ten water service leaks and one water main break, updated / replaced twelve water services from the main to the curb stop, assisted in the replacement of seven services from the curb stop to the house, closed and capped three abandoned services, replaced two hydrants, added one new hydrant, replaced two mainline valves and added three new connections to the water system.

The Board meets on alternate Wednesdays at 3:30 p.m. at the Monson Water Dept.; meetings are posted at the town offices and on our web page. The public is always invited to attend or contact us with any concerns you may have with your water quality. Your support is appreciated as the Commission and staff strive to improve and upgrade the water system and ensuring you receive the highest quality drinking water and best service possible 24 hours a day, 365 days per year. For more information about your water system, please visit Our Page on the Town's Web-Site at www.monson-ma.gov

Sources of Drinking Water ~ Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming; **Pesticides and herbicides**, may come from a variety of sources such as agriculture, urban storm water runoff and residential uses; **Organic chemical contaminants**, include synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; **Radioactive contaminants** which can be naturally-occurring or be a result of oil and gas production, and mining activities.

Monson's Water Sources	DEP Source ID #	Source Type	Location
Bethany Rd Well	1191000-03G	Groundwater	East side of Chicopee Brook off of Bethany Rd
Palmer Rd Well	1191000-04G	Groundwater	West side of Chicopee Brook off of Rt. 32
Bunyan Rd Replacement Wells	1191000-06G & 07G	Groundwater	West side of Chicopee Brook off of Bunyan Rd

Total Pumping for 2014 = 123,238,000 gal. Average rate of 337,638 gal./day. Our peak day was 760,000 gal. on 06/22/2014

Monson Source Protection ~ MassDEP completed a Source Water Assessment and Protection (SWAP) Report in 2002 which assesses the susceptibility of the water sources supplying Monson. The SWAP report is available at our office or online at www.state.ma.us/dep/brp/dws/. Based on the information collected during the assessment our system received a susceptibility ranking of high. One of the major recommendations of the report was the completion and adoption of a Source Water Protection Plan (SWPP) which was done in 2004 and available at our office or online on our web page. This plan will assist us in minimizing risks to our water sources and provide guidelines for future growth and development. Remember to protect your drinking water through proper auto care and waste disposal and remember to dispose of hazardous household chemicals at hazardous materials collection days. If you choose to fertilize think about using organic types. Please follow the directions on the package and use only what is necessary.

How Is Monson's Water Treated? ~ Many drinking water sources in New England are naturally corrosive (i.e. they have a pH of less than 7.0). So, the water they supply has a tendency to corrode and dissolve the metal piping it flows through. This not only damages pipes but can also add harmful metals, such as lead and copper, to the water. For this reason it is beneficial to add chemicals that make the water neutral or slightly alkaline. The Monson Water Department adds Sodium Carbonate (Soda Ash) to adjust the water to a non-corrosive pH. Testing throughout the water system has shown that this treatment has been effective at reducing lead and copper concentrations. Calcium hypochlorite, also known as chlorine is being added for disinfection as a preventive measure to ensure our water is clean and bacteria free.

Cross Connection Program ~ A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of fire hydrant use in the town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow-prevention device can prevent this problem. The Monson Water Department recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this device at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town! For additional information on cross connections and on the status of your water system's cross connection program, please contact us or visit the cross connection control page on our web site.

Water Main Flushing ~ Our semi-annual hydrant flushing program was completed for 2014. The hydrant flushing program takes 18 working days to complete in addition to the many hours of preparation beforehand and cleanup afterwards. It insures our water quality is at its best and allows us to test the functionality of our hydrants and mainline valves. We realize it can be very inconvenient to our customers but is highly beneficial to our water system and we thank you for your patience.

MONSON (PWS ID# 1191000) 2014
Water Quality Testing Results

The MassDEP has reduced the monitoring requirements for the following contaminant groups because that particular source has been determined not to be at risk of contamination. The date the last sample was collected for the specific group is listed in the table below and was found to meet all applicable EPA and MassDEP standards.

2014 Water Quality Monitoring Waiver Status								
Source	VOC	Sampled	SOC	Sampled	IOC	Sampled	Perchlorate	Sampled
Bethany Rd Well	No	11/17/2014	Yes	3/8/2012	Yes	07/18/2011	Yes	07/18/2011
Palmer Rd Well	No	11/17/2014	Yes	3/8/2012	Yes	07/18/2011	Yes	07/18/2011
Bunyan Rd Replacement Wells #1 & #2	Yes	11/17/2014	Yes	3/8/2012	Yes	07/18/2011	Yes	07/18/2011

VOC = volatile organic contaminants; **SOC** = synthetic organic contaminants; **IOC** = Inorganic contaminants.

The water quality test results presented in the table below are from the most recent round of testing done in accordance with the regulations. All data shown was collected during the last calendar year unless otherwise noted in the table. We are committed to providing you with the best water quality available. We are proud to report that last year your drinking water met all applicable health standards regulated by the state and federal government. Visit our web page for additional testing information. Please note a list of terms, abbreviations and definitions-used has been included below the table.

Contaminant	Level Detected	HDL	MCL	MCLG	Date	Violation	Possible Sources
Barium	0.028-0.05 ppm	0.05 ppm	2 ppm	2 ppm	7/18/2011	No	Discharge from drilling wastes & metal refineries, erosion of natural deposits
Nitrate	0.70 – 1.6 ppm	1.6 ppm	10 ppm	10 ppm	7/1/2014	No	Runoff from fertilizer use, leaching from septic tanks, erosion of natural deposits
Perchlorate	0.076 – 0.145 ppb	0.145 ppb	2.0 ppb	N/A	7/18/2011	No	Rocket propellants, fireworks, flares, blasting agents
Sodium	35.0 – 70.0 ppm	70.0 ppm	none	none	7/1/2014	No	Erosion of natural deposits
Gross Alpha Activity	0.14 - 0.40 pCi/L	0.40 pCi/L	15 pCi/L	0 pCi/L	5/2/2006	No	Erosion of natural deposits
Radium 228	0.34 - 0.82 pCi/L	0.82 pCi/L	5 pCi/L	0 pCi/L	5/2/2006	No	Erosion of natural deposits

Contaminant	Level Detected	Action Level	90th Percentile	Sites Sampled	Sites Above Action Level	Violation	Sample Date	Possible Sources
Copper	0.027–0.480 ppm	1.3 ppm	0.021 ppm	20	0	No	8/27- 8/28/2014	Household plumbing
Lead	ND – 8.2 ppb	15 ppb	4.5 ppb	20	0	No	8/27- 8/28/2014	Household plumbing

Action Level (AL) = The concentration of contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow; **HDL** = Highest detected level; **Maximum Contaminant Level Goal (MCLG) =** The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety; **Maximum Contaminant Level (MCL) =** The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology; **n/a =** not applicable; **nd =** not detectable at testing limit; **ppb =** parts per billion (1 drop in 10,000 gallons); **ppm =** parts per million (1 drop in 10 gallons); **pCi/L =** picocuries per liter; **mg/L =** milligrams per liter; **90th percentile =** Nine out of every ten homes sampled were at or below this level.

Health Information ~ In order to insure that tap water is safe to drink, The MassDEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Mass Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers. Contact EPA's **Safe Drinking Water Hotline at 800-426-4791** for more information about contaminants, potential health effects and EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants. If present, elevated levels of **lead** can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Monson Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Fluoride is not added to the town's drinking water. Please discuss your children's fluoride needs with their pediatrician or dentist. Brush efficiently, always turn the water off while brushing your teeth. Wasted water is money down the drain.

Water Saving Tips ~ Small drips can waste up to 100 gallons of water a day. **Repair leaky** faucets, pipes, showerheads, plumbing fixtures and especially toilets to avoid high water bills and wasted water. You can't always see or hear a leaky toilet, but here is a simple test: Put a few drops of food coloring in your toilet tank, do not flush. If color appears in the bowl within 10-15 minutes, you have a leak. To repair it, the flush valve, flapper or valve seat may need cleaning or replacement. Parts are inexpensive and easy to install, or call your local plumber for assistance. **Change your habits;** Scrape dishes (but don't pre-rinse), soak pots and pans before washing. Only do full loads when washing dishes and when doing laundry use the proper setting size for the load you are washing. **Install water-saving devices,** such as high efficiency washers, low-flow sink faucets and shower heads, update your toilet to a modern unit which uses 1/3 the water an older toilet uses. **Outdoor tips,** check hoses and connectors-repair or replace any leaky parts or sections, only water when needed (grass does not move back when stepped on) and do so only during the cooler parts of the day, watering in the early morning or evening hours minimizes evaporation. Use mulch to retain water, use drought tolerant plants and add shade trees and shrubs to protect your lawn from the scorching sun. Visit our Frequently Asked Questions page on the Town's Web-Site at www.monson-ma.gov for more conservation tips.